Missouri Assessment Program
Spring 2002

Mathematics

Released Items
Scoring Guide

Grade 10

Session: 1
Item No.: 4
Page No.: 6
Content Standard(s): 5 Mathematical Systems and Number Theory
Process Standard(s): 3.3

Exemplary Response:

- 4 (even sums)
  6 (odd sums)

AND

- E1 + E2 = E
  E1 + E3 = E
  E2 + E3 = E
  O1 + O2 = E

  E1 + O1 = O
  E1 + O2 = O
  E2 + O1 = O
  E2 + O2 = O
  E3 + O1 = O
  E3 + O2 = O

OR

Other valid process

Score Points:

2 points	Exemplary response
1 point	Correct process; error in computation OR Correct answer only
0 points	Other

Session: 1
Item No.: 11
Page No.: 12–13
Content Standard(s): 2 Geometric/Spatial Sense and Measurement
Process Standard(s): 2.1, 4.1

Score Points:

4 points — The student's response fully addresses the performance event.

The response:

- demonstrates knowledge of the mathematical concepts and principles needed to complete the event.
- communicates all process components that lead to an appropriate and systematic solution.
- may have only minor flaws with no effect on the reasonableness of the solution.

3 points — The student's response substantially addresses the performance event.

The response:

- demonstrates knowledge of the mathematical concepts and principles needed to complete the event.
- communicates most process components that lead to an appropriate and systematic solution.
- may have only minor flaws with minimal effect on the reasonableness of the solution.

2 points — The student's response partially addresses the performance event.

The response:

- demonstrates a limited knowledge of the mathematical concepts and principles needed to complete the event.
- communicates some process components that lead to an appropriate and systematic solution.
- may have flaws or extraneous information that indicates some lack of understanding or confusion.

Session: 1
Item No.: 11
Page No.: 12–13
Content Standard(s): 2 Geometric/Spatial Sense and Measurement
Process Standard(s): 2.1, 4.1

1 point

The student's response minimally addresses the performance event.

The response:

- demonstrates a limited knowledge of the mathematical concepts and principles needed to complete the event.
- communicates few or no process components that lead to an appropriate and systematic solution.
- may have flaws or extraneous information that indicates lack of understanding or confusion.

0 points

Other—Responses not addressed by the Condition Codes:

Example of "0":

Work consists of copying the prompt information only.
Work indicates no mathematical understanding of the task.

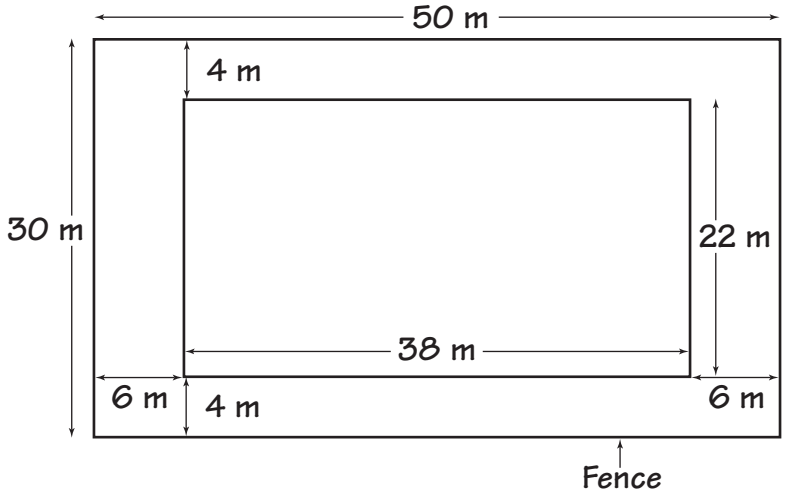
Session: 1
Item No.: 11
Page No.: 12–13
Content Standard(s): 2 Geometric/Spatial Sense and Measurement
Process Standard(s): 2.1, 4.1

Exemplary Response:

- Letter equivalent to the following:

  Dear Committee Members,

  I am submitting a plan for the pool you plan to build. I have included the dimensions of the pool and notes to explain how the pool meets the requirements.



Perimeter ≤ 120 meters
$22 + x \leq 60$
$x \leq 38$

The total surface area of the pool is 836 square meters. If the width of the pool is less than 22 meters, total surface area is not maximized. The fence is 4 meters from each longer side of the pool and 6 meters from each shorter side of the pool. The pool dimensions are 22 meters by 38 meters to obtain the largest surface area possible.

Score Points:

Apply the 4-point holistic rubric.

Session: 2
Item No.: 5
Page No.: 6
Content Standard(s): 4 Patterns and Relationships
Process Standard(s): 1.10

Exemplary Response:

- 30 (pounds of walnuts)
  20 (pounds of peanuts)

AND

- x = pounds of peanuts
  y = pounds of walnuts
  Total Cost = \$1(x) + \$2(y) = \$1.60(50) = \$80
  Total pounds:
  $x + y = 50$
  $x = 50 - y$
  $x + 2y = 80$
  $50 - y + 2y = 80$
  $50 + y = 80$
  $y = 30$ pounds of walnuts
  $50 - y = x$
  $50 - 30 = x = 20$ pounds of peanuts

  OR

  Other valid process

Score Points:

2 points	Exemplary response
1 point	Correct process; error in computation OR Correct answer only
0 points	Other